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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/183,800	01/21/94	YAMAZAKI	S 0756958

SIXBEY, FRIEDMAN, LEEDOM & FERGUSON  
2010 CORPORATE RIDGE  
SUITE 600  
MCLEAN VA 22102

B5M1/0610

EXAMINER
CRANE, S

ART UNIT	PAPER NUMBER
2508	37

DATE MAILED: 06/10/97

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☒ Responsive to communication(s) filed on 3/17/97
- ☒ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 23-38 is/are pending in the application.
- Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 23-38 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of Reference Cited, PTO-892
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

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Art Unit: 2508

## DETAILED ACTION

### *Double Patenting*

Claims 23-38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 5,313,075 or claims 1-14 of U.S. Patent No. 5,272,654. Although the conflicting claims are not identical, they are not patentably distinct from each other because of reasons of record on page 2 of the Office action of 11/14/96.

### *Response to Arguments*

Applicant's arguments filed 3/17/97 have been fully considered but they are not persuasive. Applicant argues that the claims in the patents do not recite the specific concentrations of oxygen, carbon or nitrogen included in the pending claims. It is obvious to add, for example, carbon to silicon to vary the bandgap, in order to produce the well-known compound  $\text{Si}_x\text{C}_{1-x}$ . Oxygen would be obvious because it "promotes crystallization degree of the silicon semiconductor film," as noted in 5,262,654 at column 6, lines 41-42. Nitrogen, carbon and oxygen are also necessary by-products of the reaction gasses used, as taught in 5,313,075 at column 8, lines 9-18, and some of these atoms would of necessity be incorporated in films grown using the processes disclosed in the patents. The concentration range of " $1 \times 10^{19}$  atoms/cm<sup>3</sup> or less" covers pretty much the entire concentration range for impurities in silicon.

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*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire **THREE MONTHS** from the date of this action. In the event a first response is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (703) 308-4894.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0956.



Sara W. Crane  
Examiner  
Art Unit 2508